

**CLAIMS**

What is claimed is:

- 5        1. A method of diagnosing an inflammatory disease or condition associated with articular cartilage or bone surfaces in a mammal, comprising:
- a) obtaining a patient sample from said mammal; and
- b) detecting an amount of a chlorinated compound/peptide(s) in said sample.
- 10       2. The method of Claim 1 wherein said detecting step further comprises measuring said amount of said chlorinated compound/peptide(s) in said patient sample.
3. The method of Claim 1 wherein said chlorinated compound/peptide(s) are at
- 15        least one of the group of chlorinated forms of pyridinoline cross-links, lysine/hydroxylysine residues, aromatic amino acids, ketoimines and pyrrole cross-links.
4. The method of Claim 1 wherein said method comprises the immunospecific
- 20        binding of an antibody to said chlorinated compound/peptide(s) in said patient sample.
5. The method of Claim 1 wherein said method comprises detecting said
- chlorinated compound/peptide(s) in said patient sample by U.V. absorbance or
- 25        fluorescence.
6. The method of Claim 1 wherein said method comprises detecting said
- chlorinated compound/peptide(s) in said patient sample by mass spectrometry.
- 30       7. A method of monitoring a course of therapeutic agent(s) in treating a diseased condition associated with articular cartilage or bone surfaces in a mammal, comprising:
- a) obtaining a patient sample from said mammal;
- b) detecting an amount of a chlorinated compound/ peptide(s); and
- 35        c) measuring said amount of said chlorinated compound/ peptide(s).

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8. The method of Claim 7 wherein said chlorinated compound/peptide(s) are at least one of the group of chlorinated forms of pyridinoline cross-links, lysine/hydroxylysine residues, aromatic amino acids, ketoimines and pyrrole cross-links.
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9. The method of Claim 7 wherein said method comprises the immunospecific binding of an antibody to said chlorinated compound/peptide(s) in said patient sample.
11. The method of Claim 7 wherein said method comprises detecting said chlorinated compound/peptide(s) in said patient sample by U.V. absorbance or fluorescence.
12. The method of Claim 7 wherein said method comprises detecting said chlorinated compound/peptide(s) in said patient sample by mass spectrometry.
13. A test kit for detecting and/or measuring a chlorinated compound/ peptide(s) in a mammal, comprising, in one or more containers, an antibody immunospecific for said chlorinated compound/peptide(s), said antibody is detectably labeled.
14. A method for preparing a synovial fluid sample for analysis of a biomarker, comprising:
- a) incubating said synovial fluid sample with hyaluronidase;
  - b) digesting said synovial fluid from step a) with trypsin;
  - c) treating said synovial fluid from step b) with cyanogen bromide; and
  - d) analyzing said synovial fluid from step c) for a biomarker.
15. The method of claim 13 wherein said biomarker is a chlorinated peptide.
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